

Attachment Styles and Identity Status: An Exploratory Study

Research Thesis

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By

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### **Abstract**

The present study explored relations between attachment models and identity statuses among young adults. In terms of Erikson's and Bowlby's psychosocial theories, internal working models suggestive of a secure infant-caregiver attachment history provide a foundation for successful identity formation; insecure working models may be more likely to relate to other identity statuses. A sample of 320 adults aged 20-35 years completed (on Amazon Mechanical Turk) self-report measures pertaining to internal working models and identity statuses. The result indicates that vast majority of participants, even those with insecure attachment, were identity achievers. However, they have different tendency toward Moratorium and Foreclosure (exploration and commitment) across different attachment styles. Specifically, secure attachment tend to evidence higher level of commitment but lower lever of exploration (more in Foreclosure, less in Moratorium), compared to insecure attachment. Preoccupied individuals, on the other hand, were more likely to be explorative, but found it harder to make commitment (more in Moratorium, less in Foreclosure), compared to individuals with other attachment styles. Limitation and future direction of this study was discussed.

## Introduction

Adolescence is a vital period during which the child experiences significant physical, cognitive and social changes (Hall, 1904). Whether one can make a smooth, successful transition in this period has long-lasting effects on all aspects of one's life. According to Erikson (1963), the major task facing adolescents is to form a strong or psychosocially healthy identity that could help set them on the right course. Such identity would provide a sense of individuality and a role in society, and should result from a continuity of experience across time, an active exploration of alternatives, and some emergent exploration-based commitment (Erikson, 1963).

Marcia (1966) elaborated Erikson's identity theory by distinguishing four identity statuses. Moratorium (M) represents the process of exploration toward making a commitment. Once the individual commits to one identity after active exploration, he or she acquires the status of identity achievement (A). But when one makes a commitment without having explored alternatives, he or she is in foreclosure (F). If one has not yet made a commitment nor is seeking one, he or she is designated as identity diffused (D).

These four statuses are not equally healthy in terms of psychosocial functioning. Identity achievers are evidently the healthiest, while those in Diffusion are the most at-risk (Schwartz, et al., 2011). Individuals in Moratorium evidence increased self-knowledge, but suffer from confusion, depression, and anxiety (Schwartz, et al., 2011). As to the comparison of Achievement and Foreclosure, although they are both committed styles and scored similar on general well-being (Schwartz, et al., 2011), achievement is still considered a better status in the long run, for at least three reasons. First, studies showed that achievers perceive more meaning in life and are more eudemonic (Schwartz, et al., 2011). Second, foreclosed individuals might be more depressed and anxious than they reported. Because defensiveness is more often observed in

foreclosed individuals (Kroger & Marcia, 2011), they might actually suffer more from internalizing symptoms than Achievers (Schwartz, et al., 2011). Finally, identity achieved individuals show the highest levels of ego development, moral reasoning, self-certainty, self-esteem, internal locus of control, etc. (Kroger, 1993). In contrast, foreclosed individuals have the highest levels of authoritarianism, socially stereotypical thinking, obedience to authority, external locus-of-control, and dependent relationships with significant others, at least in western samples (Kroger, 1993). But is identity achievement necessarily a much more positive outcome than foreclosure? Generally, are there early socioemotional experiences or factors that make it more likely that people will develop into one than another identity status?

Erikson's (1963, 1968, 1975, 1980) psychosocial development theory places the statuses of identity formation in a lifespan developmental context. In his theory, the individual goes through eight developmental stages. Each stage specifies a dialectic tension to resolve. Before entering adolescence, one has to work through crises or issues to develop a sense of trust, autonomy, initiative, and industry (Erikson, 1963). Since each resolution is the beginning platform for subsequent development (Pittman, Keiley, Kerpelman & Vaughn, 2011), the base of a successful identity might be traced back to the first stage, where the infant deals with trust-versus-mistrust.

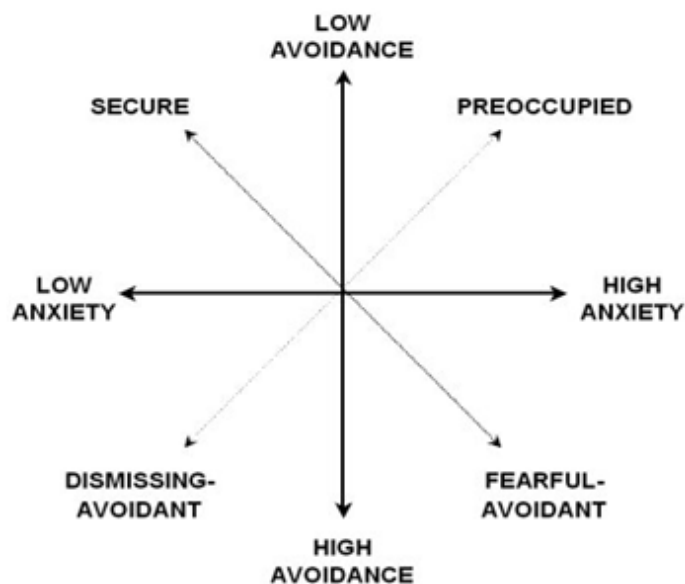
Individuals may construct a basic sense of trust through their early interaction with primary caregivers (Bowlby, 1973). The enduring affectionate tie formed in infancy with caregivers serves as a secure socioemotional base throughout one's lifetime and fosters an internal working model that signifies one's trust in self and other (Bowlby, 1973, 1980; Ainsworth et al., 1978). The mental representation of self represents one's belief about his or her lovability and worthiness of care and attention, while that of others refers to one's expectation

about others' availability toward his or her needs (Collins & Read, 1990; Bartholomew & Horowitz, 1991; Collins, 1996).

When individuals internalize the positive or negative regard from their caregivers, they form distinctive attachment styles (Bowlby, 1973, 1982). Hazan and Shaver (1987) further conceptually related the internal working models to dimensions of relationship in adults.

Individuals with a positive self-representations trust that others prospectively love and care for them, so they would actively seek intimacy and social support, while those with negative self-regard are the opposite (e.g., Bartholomew & Horowitz, 1991; Griffin & Bartholomew, 1994).

As to individuals who negatively evaluate themselves, they are more concerned with the attention or interest of others, and tend to be anxious and ambivalent in a relationship, while those who do not trust others would show avoidance in interpersonal relationships (Hazan & Shaver, 1987).



The two dimensions of anxiety (negative self-evaluation) and avoidance (negative other-evaluation) yield four attachment styles: secure, preoccupied, fearful, and dismissing, varying on the scale of avoidance and anxiety (Hazan & Shaver, 1987; Bartholomew, 1990). Secure

attachment refers to positive representations of self and other. Among the insecure styles, preoccupied attachment reflects negative representations of self (high anxiety) but positive ones of others (low avoidance); Dismissing indicates positive representations of self (low anxiety) but negative ones of others (high avoidance); and Fearful attachment illustrates negative representations of self and other (high anxiety, high avoidance) (Hazan & Shaver, 1987; Bartholomew, 1990).

Many studies have found relations between attachment styles and identity statuses. First, secure attachment is most likely to be associated with identity achievement. Securely attached individuals are reported as independent from external validation (Park, Crocker, & Mickelson, 2004; Bartholomew, 1990, p. 251). They are more likely to have an internal locus of control (Kroger, 1993), to explore their environment (Green & Campbell, 2000), to have more confidence and assertiveness in social situations (Collins & Read, 1990), to be more educated (Sroufe, 2005) or competent, and to have a higher level of self-actualization (Otway & Carnelley, 2013). These characteristics largely correspond to what Erikson thought one should achieve in the first four stages, i.e., trust, autonomy, initiative, and competence, in order to construct a strong identity in adolescence (Erikson, 1963). Given their greater self-confidence, securely attached individuals readily explore different alternatives and eventually commit to an identity. A meta-analysis confirmed the positive correlation ( $r = .21$ ,  $p < .01$ ) between secure attachment and achieved identity status. The highest mean proportion of secure attachment (.55) was found among identity achieved individuals (Arseth, Kroger, Martinussen & Marcia, 2009).

Second, even in lack of empirical support, Preoccupied and fearful individuals tend to fall into Foreclosure theoretically. Doubting their worth and lovability, they tend to seek validation and reassurance from others by meeting certain standards of worth and value (Park, Crocker, &

Mickelson, 2004; Brennan & Bosson, 1998; Mikulincer, 1998; Bartholomew, 1990). They are also more likely to be in overly dependent relationships, in which the anxiety regarding the possibility of rejection is always with them (Bartholomew, 1990, p.125). Being afraid of rejection from others, they do not have the secure base to gain an internal locus-of-control, to explore freely, or to argue for their own ideas when they are contested. In order to get others' approval, they are apt to fulfill the expectation from their significant others rather than themselves, so taking the foreclosed identity rather than going through active moratorium.

In Arseth and colleagues' (2009) meta-analysis, no significant relation was found between fearful or preoccupied participants and Foreclosure, and the correlation between secure attachment and identity achievement is only weak to moderate. However, it is worth noting that the participants in studies included in the analysis were mostly adolescents. A 5-wave study of adolescent identity development revealed a clear trend that the proportion of adolescents in Diffusion and Moratorium statuses decreased while that of adolescents in Foreclosure and Achievement statuses kept increasing throughout the adolescent period (Meeus, et al., 2010). By late adolescence, the majority (55.1%) of individuals cluster at identity achievement with a substantial percentage (26.2%) in identity foreclosure. In contrast, only 5.5% and 13.3% middle-to-late adolescents who participated the study were in Diffusion and Moratorium, respectively, in the last wave (Meeus, et al., 2010). So it is reasonable to infer that by emerging or young adulthood, most individuals would end up with either Foreclosure or Achievement status. At that time, the expected pattern would be more evident. This inference is also consistent with the transitional developmental property of Moratorium and Diffusion statuses, where many adolescents move out of but few move into them (Meeus, et al., 2010).

Regarding Dismissing attachment style individuals, their relations to identity status may vary. They may be least likely to comply with others' opinions because they do not see others as important or trustworthy. They value independence and self-reliance, never basing their self-esteem on family support or others' approval (Park, Crocker, & Mickelson, 2004). Therefore, they are unlikely to have a foreclosed identity. A study did show a negative correlation ( $r = -.13$ ,  $p < .01$ ) between foreclosed identity and Dismissing style (Arseth, Kroger, Martinussen & Marcia, 2009). Considering their high level of self-reliance and autonomy, they are free from external constraints and more likely to explore and adhere to self. However, since they do care about the feedback from others, they might have distorted self-knowledge. For the same reason, their seemingly high self-esteem might be inflated. With no accurate understanding about self, it would be hard to succeed in identity formation. So whether Dismissing individuals would end up with identity achievement is questionable. Another possible status is Diffusion. Because of the strong avoidance tendency, Dismissing individuals may develop a care-free diffused attitude toward forming an identity.

So one expectation of this study was that in early adulthood, securely attached individuals would be more likely to be in identity achievement, and preoccupied and fearful individuals are more likely to be foreclosed. The study also explored the possible relations of the dismissing insecure attachment style to the identity statuses.

## **Method**

### **Participants**

The present sample consisted of 283 young adults (154 male, 126 female, 3 unclassified) aged from 20 to 35 years old (mean age 26.9 years,  $SD = 4.39$ ). A total of 320 adults were



recruited on MTurk (an online crowdsourcing service where massive internet users would help complete web-based tasks, used as a tool of social science research recently), 32 of which were excluded because they were either not in the required age range, or did not provide valid data. Each participant was compensated 50 cents. Average completion time was about 20 minutes.

## **Research Design**

The study was correlational. It measured participants' attachment style and identity status using surveys at a certain time. The relation between attachment style and identity status was examined.

## **Materials**

*Measure of Attachment Style.* Attachment style was measured by a revised version of the Experiences in Close Relationships (ECR-R) scale and the Experiences in Close Relationships-Relationship Structures (ECR-RS). The ECR-R scale contains 36 items. Half of statements (e.g. "I often worry that my partner doesn't really love me") reflected participants' tendency to be anxious about their self-worth in close relationship ( $\alpha = .931$ ), the other half (e.g., "I get uncomfortable when a romantic partner wants to be very close") reflected how avoidant participants tend to be in their close relationships ( $\alpha = .896$ ). The comparative level of avoidance and anxiety could illustrate one's attachment style (Fraley et al., 2000). The ECR-RS assesses attachment patterns across a variety of close relationships – relationships with mother, father, romantic partner, and best friend (Fraley et al., 2011). The same 9 items concerning anxiety ( $\alpha = .909$ ) and avoidance ( $\alpha = .909$ ) level apply for each attachment target. Two extra items directly derived from the definition of self and other internal working model were also added to the survey. The statements are "I believe in my lovability and worthiness of care" and "I believe that others are trustworthy and would be available for me". When the two scales and the statements

concerning internal working models were combined, the reliability was higher than any single of the single scale ( $\alpha = .946$  for anxiety,  $\alpha = .927$  for avoidance).

*Measure of Identity Status.* Identity status is measured by the Ego Identity Process Questionnaire (EIPQ) and Dimensions of Identity Development Scale (DIDS). The EIPQ contains 32 items. Participants rated on statements such as “There has never been a need to question my values” and “I think what I look for in a friend could change in the future”. It assesses exploration and commitment in four ideological domains (politics, religion, occupation, values) and four interpersonal domains (friendships, dating, gender roles, family) (Schwartz, 2004). The EIPQ assigns identity statuses to participants by median splits on the exploration and commitment scores (Schwartz, 2004). The DIDS consists of five-item scales for each of the five identity dimensions proposed by Luyckx et al. (2006a, b, 2008a, b, c): commitment making ( $\alpha = .91$ ), identification with commitment ( $\alpha = .93$ ), exploration in breadth ( $\alpha = .84$ ), exploration in depth ( $\alpha = .81$ ), and ruminative exploration ( $\alpha = .85$ ). The scores on exploration and commitment could help underpin participants’ identity statuses.

*Seriousness Check.* At the end of the each survey, there were seriousness check questions added, e.g. “Please choose “Neutral” for this item”, “I took this study seriously”.

## **Procedure**

The study link was shown on the list of HITs for workers (users on MTurk who work on tasks) to choose from. Once the participants clicked into the web page of the study, they were informed about the basic characteristics about the study. After signing the informed consent form, they filled out a brief demographic questionnaire concerning age, gender, ethnicity, and primary language (participants’ identity will not be collected), followed by four surveys measuring their attachment style and identity status. Finally, the debriefing was offered. The

whole study took around 20 minutes. 50 cents were added to each respondent's MTurk account as compensation for their participation.

## Results

Following preliminary results relating to the measures, the main results of the study are presented below.

### Categorization

Since the reliability of all items in ECR-RS, ECR-R, and the extra items concerning internal working models altogether have higher reliability ( $\alpha = .946$  for anxiety,  $\alpha = .927$  for avoidance) than any single scale, they were all combined to represent participant's anxiety and avoidance level in close relationships when doing the data analysis. Attachment style was categorized conceptually by assigning participants scoring low (lower than the half of the total score they could have) on both anxiety and avoidance to secure attachment, participants scoring high on anxiety and low on avoidance to preoccupied attachment, participants scoring high on avoidance but low on anxiety to dismissing attachment, and participants who scored high on both anxiety and avoidance to fearful attachment. Under this categorization, more than half of the participants (57.4%) were securely attached, 21.3% were preoccupied, 14.9% were fearful, and very few of participants fallen into dismissing attachment style (6.4%).

Due to the poor reliability of EIPQ ( $\alpha = .541$  for commitment,  $\alpha = .497$  for exploration), the analysis on identity mainly relied on DIDS. Based on definition, participants who scored high on both exploration and commitment score (higher than the half of the total score they can have) were assigned to Identity Achievement; those who scored high on commitment but low on exploration were classified as Foreclosure; those who scored low on commitment but high on

exploration were classified as Moratorium; and those who scored low on both exploration and commitment were assigned to Diffusion.

## Results

The results showed that the vast majority of young adults (79.4 %), even those with insecure attachment, achieved identity (identity achievement percentages were slightly but non-significantly lower among those with insecure attachment histories; Table1). Among those participants with less strong or less psychosocially healthy identity statuses, 13.8% were in Moratorium, 5.7% in Foreclosure, and only 1.1% diffused. Therefore, the hypothesis that securely attached individuals are likely to be identity achievers was supported—but, unexpectedly, participants with *insecure* attachment histories were also well represented among identity achievers. Foreclosure is not the status that preoccupied and fearful individuals are most likely to be in.

		Identity Status				Total
		Achievement	Moratorium	Foreclosure	Diffusion	
Attachment Style	Secure	132	15	13	2	162
		81.5%	9.3%	8%	1.2%	100%
	Preoccupied	45	15	0	0	60
		75%	25%	0%	0%	100%
	Dismissing	14	3	1	0	18
		77.8%	16.7%	5.6%	0%	100%
	Fearful	33	6	2	1	42
		78.6%	14.3%	4.8%	2.4%	100%
Total		224	39	16	3	282
		79.4%	13.8%	5.7%	1.1%	100%

Table 1: Crosstab – Identity status and Attachment style.

Even though the proportion of identity achievers was not significantly higher among securely relative to insecure attached participants, some interesting and unexpected relations emerged between (secure/insecure) attachment style and (achieved/non-achieved) identity. In other words, participants with different attachment styles showed different identity status

tendencies. Following identity achievement, moratorium and foreclosure were also found to a notable degree among participants with a secure attachment style history. We expected, based on theory, that the moratorium status would stand out as higher among the secure-attachment participants. Inconsistent with our expectation, however, we found that moratorium (with its emphasis on active, if stressful, exploration and lack of commitment) was actually higher among the *insecure* (especially, preoccupied) participants (Table2; Table4). The preoccupied-insecure participants were correspondingly lower in foreclosure (with its emphasis on commitment rather than active exploration; Table3, Table5). Also surprising were the *higher* percentages of Foreclosure status (commitment with little active exploration) among the secure (relative to the insecure) participants (Table3). Fearful participants were not very different from other participant in terms of the likelihood of falling into a certain identity status (Table1). Due to the limited amount of dismissing participants, no conclusion can be drawn about them in this study (Table1).

		Moratorium	other	Total
Secure	Observed	15	147	162
	Expected	22.4	139.6	162
	% within	9.3%	90.7%	100%
Insecure	Observed	24	96	120
	Expected	16.6	103.4	120
	% within	20%	80%	100%
Total	Observed	39	243	282
	Expected	39	243	282
	% within	13.8%	86.2%	100%

Table 2: Chi-square test on Secure & Insecure by Moratorium & other

\*\*  $\chi^2 = 6.673$ ,  $p=.01$

		Foreclosure	other	Total
Secure	Observed	13	149	162
	Expected	9.2	152.8	162.0
	% within	8.0%	92.0%	100.0%
Insecure	Observed	3	117	120
	Expected	6.8	113.2	120.0
	% within	2.5%	97.5%	100.0%
Total	Observed	16	266	282
	Expected	16.0	266.0	282.0
	% within	5.7%	94.3%	100.0%

Table 3: Chi-square test on Secure &amp; Insecure by Foreclosure &amp; other

$$*\chi^2 = 3.932, p < .05$$

		Moratorium	other	Total
Preoccupied	Observed	15	45	60
	Expected	8.3	51.7	60.0
	% within	25.0%	75.0%	100.0%
Other	Observed	24	198	222
	Expected	30.7	191.3	222.0
	% within	10.8%	89.2%	100.0%
Total	Observed	39	243	282
	Expected	39.0	243.0	282.0
	% within	13.8%	86.2%	100.0%

Table 4: Chi-square test on Preoccupied &amp; other by Moratorium &amp; other

$$** \chi^2 = 7.98, p < .01$$

		Foreclosure	other	Total
Preoccupied	Observed	0	60	60
	Expected	3.4	56.6	60.0
	% within	0.0%	100.0%	100.0%
Other	Observed	16	206	222
	Expected	12.6	209.4	222.0
	% within	7.2%	92.8%	100.0%
Total	Observed	16	266	282
	Expected	16.0	266.0	282.0
	% within	5.7%	94.3%	100.0%

Table 5: Chi-square test on Preoccupied & other by Foreclosure & other  
 $\chi^2 = 4.584$ ,  $p < .05$

The correlational analyses were generally consistent with these findings. Participants who were anxious ( $r = .85$ ,  $p < .001$ ) or avoidant ( $r = .78$ ,  $p < .001$ ) in close relationships tend to actively take part in exploration, while anxiety ( $r = -.28$ ,  $p < .001$ ) and avoidance ( $r = -.28$ ,  $p < .001$ ) were negatively correlated to commitment. According to these correlations, secure individuals, who are low in both anxiety and avoidance, tend to commit, but not to explore, which make more likely to be in Foreclosure, rather than Achievement or Moratorium. Regarding preoccupied and fearful individuals, since their anxiety level is high, they tend to explore and to be in Moratorium.

	Anxiety	Avoidance
Exploration	.85**	.78**
Commitment	-.28**	-.28**

Table 6: Correlations between anxiety/avoidance and exploration/commitment.  
 \*\*  $p < .001$

## Discussion

This study examined relations between attachment style and identity status among young adults. Contrary to expectations, young adults with an insecure attachment style were no less

likely to be identity achievers than were secure ones. Evidently, insecure attachment is not a hindrance (at least in this age group) for identity achievement. Therefore, instead of early interpersonal relationships, later social environment may actually play a more decisive role in identity development. Insecure attachment styles, however, did relate differentially to identity statuses other than achievement, for example, the tendency to stay in Foreclosure or Moratorium. Relative to those with secure and other insecure attachment styles, preoccupied young adults were more likely to be in Moratorium and less likely to be in Foreclosure. Relative to the insecurely attached, securely attached individuals, if they are not in identity achievement, may also be in Foreclosure (but not in Moratorium).

It was unexpected but also understandable that preoccupied young adults might prefer exploration over commitment. Given that preoccupied individuals usually believe in others but doubt their self-worth and lovability, it had been anticipated that they would commit to what others expected them to do in order to seek external validation. Nevertheless, it seems that their anxiety about their self-worth does not reflect on what they commit to (Foreclosure or Achievement), but whether they make commitments in the first place. Due to their constant anxiety and doubt about their identity, making a commitment is difficult for them. It was thought that their trust in others might ease their anxiety about the self, but that might not be the case. Making a commitment without earlier exploration or hesitation, i.e., entering into Foreclosure, turns out to be especially hard for them. As a result, preoccupied individuals are likely to spend more time in exploration, and may also tend to step back from commitment, which leaves more of them in Moratorium, rather than Foreclosure.

Securely attached individuals are the opposite. They find it easy to commit and may not need to spend as much time exploring. It is surprising that secure individuals are more likely to



be foreclosed than insecure attached ones, which gives rise to the possibility that some of those foreclosures might actually be achievers. Many securely attached individuals are raised up by encouraging and supportive parents in a delightful and open environment, which allows them to explore and develop their identity early and all along. Without many constraints posed by the environment, they have nothing to rebel or fight against, so they could fully follow their heart and passion. In this way, some of them might have a clear idea about who they are or what they want to be at early age without much struggle or frustration, which leaves them with the impression that they have never really explored. Another possible explanation is that their trust in others and the certainty they have for the self gives them a secure base to accept and naturally internalize the external influence. They would not always feel uncomfortable about fulfilling parents' expectations and would be willing to consider others' suggestions because they believe that what their parents or significant others have for them are the best. Sometimes, they do find that what other people expect for them are what they are really suitable for. An implication here is that being in Foreclosure is not necessarily less healthy than Achievement. Even without apparent stressful and active exploration, people still could achieve a strong identity, and if this is the case, Foreclosure could be even more positive than Achievement. As Cote and Levine (2002) argued, Foreclosure is a psychosocially healthy identity outcome in the cultural context of stable premodern societies.

The correlational analyses showed that attachment insecurity (lacking trust for either the self or other) is related to identity exploration, which can actually bring about psychological instability and stress. It is thought that people would have to have a strong sense of security in order to devote to active exploration, but the high correlation between exploration and anxiety in our sample reveals that exploration might also bring about psychological distress. There is no

denying that for most people, exploration is a positive status leading to their identity achievement. However, exploration can also be a manifestation of insecurity, anxiety, and inability to commit, especially for people who constantly explore or frequently step back from commitment. People who are more anxious about their self-worth may be more likely to be stressed to find out about the self, and so are more explorative. Moreover, one third of items in the exploration measure concern ruminative exploration – “I am doubtful about what I really want to achieve in life”, “I keep wondering which direction my life has to take”, “It is hard for me to stop thinking about the direction I want to follow in life”, “I worry about what I want to do with my future”—revealing a great amount of anxiety about self-identity. It is also possible that the uncertainty and anxiety shown in close relationships might be consistent with the stress one feels about his or her identity, which signifies the psychological status of exploration.

Exploration is also highly correlated with avoidance, which is reasonable because trusting others is vital for people to internalize external influences. No one lives alone in this world, so everyone is exposed to the influence from people around him or her. Lacking trust in others makes it harder for avoidant individuals to accept an identity shaped more or less by the environment; perhaps that is what keeps them in Moratorium longer.

There are several limitations of this study. First, since dismissing and fearful attached people are very scarce among the target population, a much larger sample size is needed to make any conclusion about them. A larger sample may also reveal some significant differences that were not captured by this study. For example, people with secure attachment might be significantly more likely to be identity achiever than insecure people. Second, the study totally relies on self-report measurement, which is not always dependable or comprehensive. Future studies should incorporate behavior observation and other-report measures. Case studies as well

as a longitudinal design would be especially helpful to explain the results. If interviews could be set up for some of the foreclosed participants, whether they explored mildly in early age or they did not explore by themselves at all could be ascertained. Third, the result may vary if different measures or different data analysis techniques were used. Because people's tendency to avoid or to be anxious about the self, and to what extent they explore or commit are on a continuous spectrum; hence, classifying them into certain categories to search for the pattern is risky. It is hard to decide where to set the cut-off; a little shift could cause a huge difference in the distribution across different categories. It is also hard to decide which measurement for identity status and attachment style is the most suitable in this case. There are many theoretically supportable measurements out there, and which one is used could have great impact on the result. Therefore, when interpreting and applying the result, special caution should be paid to the measurement being used.

Cultural differences should be taken into consideration as well. The participants in this study are limited geographically to the United States, and mostly Caucasian (72.7%). In the United States and most English-speaking countries, individualism is dominant (Hofstede, 1980). In these heterogeneous and competitive societies, each individual wants to be distinguished by winning the competition and dominating others, so the emphasis is on an independent-different self (Durkheim, 1949; Markus & Kitayama, 1991, 2003). In order to encourage the individuality, English-speaking society usually offers many resources and social support for people to explore and choose from diverse options. For example, it is fairly easy for students to have various working experience before going to college, to change major, to take gap year, or to go back to school after work. Different belief systems, either religious or political, are also highly visible and accessible. However, in much of Asia, Latin America, Africa and parts of Europe (e.g.,

Southern Italy, rural Greece), collectivism is more stressed (Hofstede, 1980). Durkheim (1949) argued that people from these relatively homogeneous cultures feel close to others because of their similarities. They share the norms, roles, rules, and values, so they try to develop an interdependent self that is consistent with the social expectation (Durkheim, 1949; Markus & Kitayama, 1991, 2003). If culture difference does exist substantially, it would also be more confident to infer that social factors are more critical than early interpersonal relationship in the process of identity formation.

Previous studies also showed that resource availability has its influence on culture (Triandis, 1993). The upper class in all societies and lower class with extreme lack of resources are associated with individualism (Turnbull, 1972). Therefore, future studies could first recruit more participants and use more diverse research techniques to get more comprehensive and accurate data. Then, the research should be replicated and interpreted in the context of different culture settings, which might yield different patterns. For example, as noted, Foreclosure may be more common in collective cultures, but it probably is a healthier and more adaptive identity status in a stable premodern culture context.

In sum, even though a secure versus insecure attachment history may not have a fundamental influence on one's later identity formation, secure young adults may feel more comfortable to commit and preoccupied ones spend more time exploring. Considering that some of the foreclosure cases with secure attachment might be equivalent to identity achievers in terms of psychological well-being, secure attachment may still be associated with the most positive result in identity formation. If that is the case, it would be valuable to educate parents and help them provide their children with a secure environment.

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